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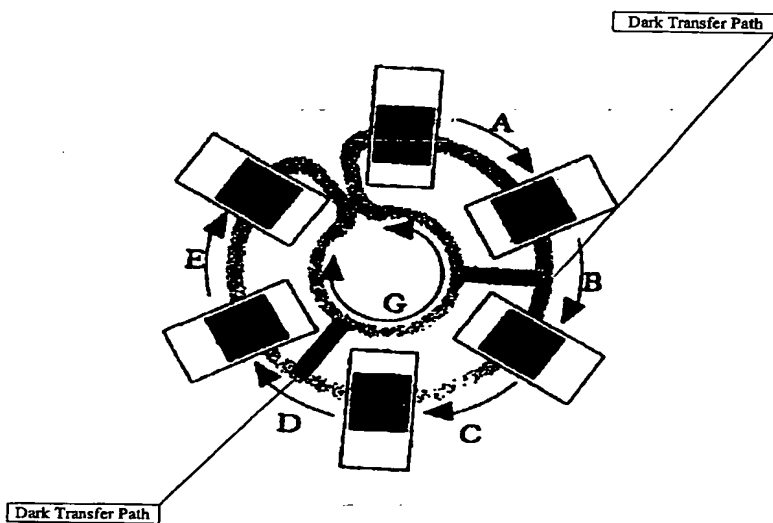
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(54) Title: PRODUCTION LINES UTILIZING AUTO GUIDED PALLET AND PRODUCTION LINE DESIGN SUPPORT SYSTEM



Transfer path combining Job Type and Flow Type transfer paths

(57) Abstract: The present invention is a new manufacturing system which is small one that can mount on a desk and the like. The inventors call it a DTF (Desk Top Factory) such as to mean a small factory. In the present application is described what "DTF" aims at and two main items are described in this report. 1) A manufacturing system having an automatic guided pallet (what is called "AGP") as an automatic transport system. This AGP system is in harmony with an advantage of conventional two transfer systems of manufacturing lines that is, a flow shop type (what is called "assembly line"), which is suitable for a mass-manufacturing, has the advantage of being able to minimize the distance transferred between each process in the system and a job shop type (there is much to need a batch working) has an advantage of enabling traffic (go and return) between each process. The present invention develops an Automatic Guided Pallet (AGP) that is suitable for one-by-one operation and can traffic (go and return) between each process. The present system can be used in a flexible manufacturing

system where the volume of production is relatively low and there are a wide variety of products to be made. 2) A manufacturing line design support system. One embodiment is that firstly, an operator inputs system design requirements of a manufacturing line design such as a working time of each process, an operating rate, plant and equipment cost and the like, furthermore, the weight (importance) of each of the above requirements is inputted. Secondly, the system outputs some candidates, respectively. Finally, the system allows the construction of the optimum manufacturing line by simulations.